

Abstract

[0220] Apparatus and methods of measuring three-dimensional position information of a point on the surface of an object. The invention also relates to an apparatus for projecting fringes onto a surface of an object including two sources of radiation separated by a distance, each source having a spectral distribution, and being coherent with respect to the other of the sources, a control system moving each of the sources relative to the other of the sources, and a detector positioned to receive radiation scattered from the point on the surface of the object. In another embodiment, the two sources of radiation include, an initial source of a beam of radiation having a spectral width, a beam separator in optical communication with the initial source of a beam of radiation generating a first optical beam and a second optical beam, and an imaging system optically connected to the beam separator.